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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,437	04/24/2001	George Leo Stegemeier	5659-08100/EBM	5260

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DEL CHRISTENSEN  
SHELL OIL COMPANY  
P.O. BOX 2463  
HOUSTON, TX 77252-2463

EXAMINER

SUCHFIELD, GEORGE A

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 11/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/841,437

Applicant(s)

STEGEMEIER ET AL.

Examiner

George Suchfield

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 531-610, 623-625, 665-706 and 745-784 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 531-610, 623-625, 665-706 and 745-784 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 531-610, 623-625, 665-706, drawn to a method of heating a coal formation wherein the pressure is controlled as a function of temperature or the temperature is controlled by a function of pressure, including the use of specific or exemplary pressure-temperature relationships, classified in class 166, subclass 245.
- II. Claims 745-784, drawn to a method of heating a coal formation including overall controlling the relationship of pressure to temperature within the formation by both selected energy input into, and by pressure release from, wellbores of one or more heat sources, classified in class 166, subclass 245.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation and/or different effects, for example, the Group II invention requires specific steps of selected energy input into the heat sources and effecting pressure release from wellbores including heat sources, not required in the Groups I invention; the Group I invention requires the use of specific pressure temperature relationships or formulas to control the composition of the produced mixture.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

5. This application contains claims directed to the following patentably distinct species of the claimed invention: Within the Group I invention, the following species are observed:

- A. Claims 570-609, drawn to a method of heating a coal formation wherein the API gravity of a produced mixture is greater than 25o API by controlling the average pressure and temperature in the formation based on an exemplary pressure/temperature relationship or formula, as recited.
- B. Claim 610, drawn to heating a coal formation such that the formation temperature exceeds 270oC and controlling the formation pressure based on an exemplary pressure/temperature relationship or formula, as recited.
- C. Claims 623-625, drawn to a method of heating a coal formation wherein the weight percentage of olefins in the produced mixture is less than 20 weight % by controlling the average pressure and temperature in the formation based on an exemplary pressure/temperature relationship or formula, as recited.
- D. Claims 665-703, drawn to a method of heating a coal formation wherein the weight percentage of hydrocarbons having carbon numbers greater than 25 in the produced mixture is less than 25 weight % by controlling the average pressure and temperature in the formation based on an exemplary pressure/temperature relationship or formula, as recited.

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- E. Claims 704-706, drawn to a method of heating a coal formation wherein the atomic hydrogen to carbon ratio of the produced mixture is greater than about 1.7 by controlling the average pressure and temperature in the formation based on an exemplary pressure/temperature relationship or formula, as recited.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 531-569 are generic.

6. This application contains claims directed to the following additionally patentably distinct species of the claimed invention: Within the both the Groups I and II invention, the following species are observed:

F. Heating a coal formation using an electrical heater(s). Claims 534, 575, 627 and 669 exemplify this species.

G. Heating a coal formation using a surface burner(s). Claims 535, 576, 628, 670 and 748 exemplify this species.

H. Heating a coal formation using a flameless distributed combustor(s). Claims 536, 577, 629, 671 and 749 exemplify this species.

I. Heating a coal formation using a natural distributed combustor(s). Claims 537, 578, 630, 672 and 750 exemplify this species.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, remaining claims in the Groups I and II inventions, within which species F-I occur, are generic.

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Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

7. In summary, applicant is required to elect between inventions I and II. If the Group I invention is elected, then applicant must further elect a species from among species A-E, and also a species from among species F-I. If the Group II invention is elected, then applicant must further elect a species from among species F-I.

8. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).


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9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Suchfield whose telephone number is 703-308-2152. The examiner can normally be reached on M-F (6:30 - 3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 703-308-2151. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687, 703-305-3597 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

  
George Suchfield  
Primary Examiner  
Art Unit 3672

gs  
November 8, 2002